Roman Arch

In ancient Rome, arches supported the weight of giant structures, such as bridges, aqueducts, and the Colosseum. Wedge-shaped blocks press together to maintain the semicircular form.

Kit contains: 7 block pieces

You will need:

- Scissors
- Glue or tape
- Weights (rocks, pennies, etc.)

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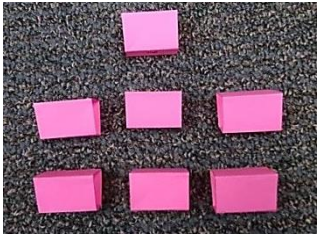
INSTRUCTIONS

Step 1. Cut out the 7 block pieces.

Step 2. Fold pieces along dotted lines.

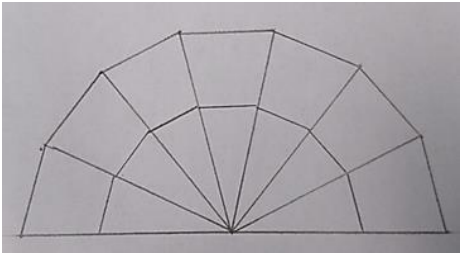
Step 3. Glue or tape the flaps together to form blocks shaped like trapezoidal prisms.

Step 4. Work with a buddy to assemble the blocks into an arch. No glue needed! Weigh down the end blocks to prevent sliding. The middle block is called the **keystone**. Without the keystone, your arch will collapse.



MATH CONNECTION

Your arch is built out of isosceles trapezoidal prisms. Imagine that the legs are extended to form triangles that meet in the middle. The sum of those vertex angles must equal 180°.



Divide 180° by the number of pieces in the arch to find the measure of the vertex angles.

- 5 pieces: $180° \div 5 = 36°$
- 7 pieces: $180° \div 7 \approx 26°$
- 9 pieces: $180° \div 9 = 20°$